

In The Specification

Please replace the paragraph beginning on page 14, line 1 with the following rewritten paragraph.

Prior to encrypting the message M, a check is made to determine whether the numerical or binary value of the message M is equal to or greater than the sender's modulus N_A (block 106). If the numerical value of message M is equal to ~~or greater~~ or greater than the sender's encryption modulus N_A , the message M would be reduced during the encryption operation by subtraction of the modulus N_A resulting in data loss. Therefore, when message M is greater than the sender's modulus N_A , the bit occupying the MSB position is changed to 0 (block 110). This ensures that modulus N_A has a greater numerical value and that data will not be lost during the encryption operation. The possibly modified message M is then signed using the sender's private key K_{PRIVA} and encryption modulus N_A (block 112) to create a once encrypted bitstring. If the RSA algorithm is used, encryption is performed using the equation $Y = M^{K_{priva}} \bmod N_A$, where Y is the signed message. The signed message Y is encrypted at step 114 using the recipient's public key K_{PUBB} and encryption modulus N_B to create a doubly-encrypted bitstring. Again, if the RSA algorithm is used, the encryption operation is performed using the $Z = Y^{K_{pubb}} \bmod N_B$ where Z is the encrypted message. The encrypted message Z is then transmitted by the sender to the recipient (block 116).